

Amendment to Claims

This listing of Claims will replace all prior versions and listings of claims in this Application.

Listing of Claims

We claim:

1 - 3 Cancelled

4. (CURRENTLY AMENDED) A method of synchronizing a multimedia content stream for output to a plurality of wired and wireless output devices in a network having plural realms, wherein each realm includes a connection control processor (CTL), the method comprising:

buffering the multimedia content stream in a first realm;

determining a buffer delay as $T_D = N * TED * R_p$, where T_D is the delay size, N is the byte size of a packet, TED is an end-to-end delay, and R_p is the transmission rate of packets per second;

transmitting the buffer delay to all CTLs in all realms of the network; and

transmitting the multimedia content stream to all realms in the network.

5. (ORIGINAL) The method of claim 4 wherein said determining includes setting a buffer size, T_D , where T_D is the product of the packet length used in the network and the number of packets to be buffered.

6. (ORIGINAL) The method of claim 5 which include determining the packet length and wherein said determining the packet length further includes inserting a coding and formatting delay factor into the packet length.

7. (ORIGINAL) The method of claim 4 wherein said determining includes determining a buffer delay as a function of the buffer delays in all of the realms of the network.

8. (NEW) A method for synchronizing a multimedia content stream signal, emanating from at least one multimedia source, for play through a plurality of output devices, wherein the output devices are connected to the multimedia source by wired connections and wireless connections; the method comprising:

providing plural output realms, including wired realms and wireless realms, wherein the wired realms each include: a wired realm transceiver; a wired realm delay synchronizer, including a wired realm buffer for storing the multimedia content stream signal; an output device connected to the wired realm delay synchronizer; and a wired realm connection control processor (CTL) connected between the first wired realm transceiver and the wired realm delay synchronizer for using delay information measured, signaled and updated from the output realms to synchronize playback at each of the output devices;

determining a wired realm buffer delay for streaming the multimedia content stream signal from the wired realm buffer to an output device; and

providing, for each wireless realms: a wireless realm transceiver; a wireless realm delay synchronizer; including a wireless realm buffer for storing the multimedia content stream signal; an output device connected to the wireless realm delay synchronizer and a wireless realm connection control processor (CTL) connected between the wireless realm transceiver and the wireless realm delay synchronizer;

disseminating medium access control (MAC) layer information about delay and jitter between the wireless realm transceiver and the wireless realm delay synchronizer;

determining a wireless realm buffer delay for streaming the multimedia content stream signal from the wireless realm buffer to an output device;
transmitting the wireless realm buffer delay to the wired realm CTL; and
transmitting the wired realm buffer delay to the wireless realm CTL.

9. (NEW) The method of claim 8 which further includes relaying the multimedia content stream signal to other wireless realms.

10. (NEW) The method of claim 8 which further includes providing, in the wired realm CTL, a clock which operates at a known rate and transmitting data from the wired realm buffer at a rate taken from the group of rates consisting of the known rate, an integer multiple of the known rate and an integer divisor of the known rate.